• **UGS 200H 001 - Introduction to Materials Research in a Service Learning for Leadership Environment**
  o Carl Boehlert: Chemical Engineering & Materials Science
  o boehlert@egr.msu.edu
  o Brief description: This seminar will allow students to learn about one of the most widely used tools in multidisciplinary materials-based research, a scanning electron microscope (SEM). The output required from the students will be a poster of their research project which uses the SEM at the university undergraduate research and arts forum (UURAF) in April 2015. This honors research seminar will also allow the students to use the knowledge they gained to teach local high school students about SEM. This will be the service learning for leadership aspect of the seminar. The instructor is the director of the Scanning Electron Microscopy Education (SEMED) outreach program at MSU. The outreach program of this award has been extremely successful and will serve as the basis for this honors research seminar. This program will offer a unique opportunity for the instructor to share his experience with freshman and sophomore level undergraduate honors students and also use this experience to continue to develop a better outreach program, which benefits both the honors students and the K-12 student participants.

• **UGS 200H 002 - Shortlisted: Stories of Women Not Nominated to the United States Supreme Court**
  o Renee Newman Knake: MSU College of Law
  o rk@law.msu.edu
  o Brief description: Students will explore the stories of fourteen extraordinary women who were qualified and considered but not selected for the nation’s highest judicial office prior to Justice Sandra Day O’Connor ultimately becoming the first female to receive the nomination. This storyline of women shortlisted to the Court has far-reaching implications beyond the obvious outsider narrative that it seeks to convey. Today, women in the legal profession are significantly under-represented in positions of power and leadership, despite relative parity among law students and lawyers entering the profession over the past two decades. Substantial attention has been paid to the barriers and obstacles that prevent women’s advancement in law, but this projects aims to reveal some of the ways in which women have been excluded from positions of power in ways not previous considered. The public nature of the nomination process enables us to analyze scrutiny of women by the profession and the media, and analogize to women similarly not selected, elected, or appointed to political office or in corporate governance, the state and federal judiciary, law firm partnership and other positions of power. Each student will be assigned one or more of the shortlisted women to profile through extensive research including (1) newspaper and media accounts; (2) judicial opinions; (3) primary sources such as diaries, journals and other writings; and (4) informational interviews with the women profiled and their colleagues/personal acquaintances. Students will present the results of their work at the University Undergraduate Research and Arts Forum.

• **UGS 200H 004 - The Sands of Mars**
  o Michael A. Velbel: Department of Geological Sciences
  o velbel@msu.edu
  o Brief description: Student participants in this seminar will examine the shapes of sand grains in instrumentally acquired images of sand from the Mars Phoenix Lander landing site on Mars, and terrestrial
analogs. Beginning with visual classification methods used by geologists to characterize and describe sediment-grain shapes in the field, student participants will examine a variety of grain types in representative mission and analog-sample images and make preliminary assessments of the transport and deposition / accumulation histories of the sands.

- **UGS 200H 005 - New media marketing: mobile and social media campaigns for impact**
  - Constantinos Coursaris: Telecommunication, Information Systems, and Media
  - coursart@msu.edu
  - Brief description: The seminar will cover a broad range of topics, from the fundamentals of human-computer interaction to the research methods available for studying new media effects. It will also cover various social media vehicles as means to engage prospective customers. This theoretical foundation will enable students to engage in new media marketing research, investigating such questions as what types of messages work best on Facebook Pages or Twitter in raising awareness about a product or increasing sales, using both survey and experimental methods.

- **UGS 200H 006 - Popular and Professional Debates over Vaccines**
  - Mark Largent: Lyman Briggs College/James Madison
  - largent@msu.edu
  - Brief description: Since the late 1990’s, many parents have grown increasingly anxious about the growing numbers of vaccines they are obligated to have administered to their children. Claims unintended side effects of vaccines as well as concerns that some vaccines might not be as effective as we first thought, have encouraged increasing numbers of parents to refuse to vaccine their children against some vaccine-preventable diseases. Students in this course will examine claims that have been made about vaccine safety and efficacy by examining popular and professional literature on the subject, including epidemiological studies, laboratory results, papers published in scientific journals, political challenges to mandatory vaccination, and the social and legal framework for challenging mandatory vaccination. Ultimately, students will design and carry out research programs on topics of their choosing and present their findings at the University Undergraduate and Research Forum.

- **UGS 200H 007 - Systems Approach for Converting Wastes to Resources**
  - Steven I. Safferan: Department of Biosystems and Agricultural Engineering
  - steves@msu.edu
  - Steve Marquie: Department of Biostystems and Agricultural Engineering
  - wb9tow@msu.edu
  - Brief description: Students will learn to critically analyze systems relating to converting wastes to resources. Systems dynamics is used by progressive organizations to make difficult decisions. This critical thinking approach maximizes the chances of identifying and quantifying intended and unintended consequences. Students will apply these skills to a self-selected waste to resource project.
and produce a brief project report. This project will be in consultation with an industry collaborator.

- **UGS 200H 008 - Stock portfolio risk diversification: myth or reality?**
  - Kirt Butler: Finance
  - butler@msu.edu
  - Antoinette Tessmer: Finance
  - tessmer1@msu.edu
  - Brief description: Do you consider yourself a risk-averse investor? Or do you better describe yourself as a risk-lover stock trader? This seminar gives the opportunity to test yourself with a $1M stock portfolio to be invested on the stock market. The seminar will discuss risk definitions and measurements when related to stock investment. Then, you will be responsible for investing your wealth while carefully controlling the risk level of your portfolio. Various risk management methods will be selected and tested. Time will tell if your method is efficient at reducing risk. Which method performs best and why? Those are the questions this seminar will empirically answer.

- **UGS 200H 009 - Video Game Impacts: Play with Meaning**
  - Rabindra (Robby) Ratan: Department of Telecommunication, Information Studies, and Media
  - rar@msu.edu
  - Brief description: How do video games affect players? This seminar will address this often controversial and complex question. Students in the seminar will learn about recent approaches to research on this topic, with a specific emphasis on positive video game impacts (e.g., health, learning). Teams of three to four students will design and conduct original research studies on a video game impact of interest and then write up research articles about the projects. These activities will allow students to immerse themselves in the process of video games research and may inspire some to pursue media research careers of their own.

- **UGS 200H 010 - Theatre & Game Engines: Researching new methods of audience interaction in live performance**
  - Alison Dobbins: Department of Theatre
  - dobbinsa@msu.edu
  - Brief description: Seminar will cover key concepts at the forefront of digital theatre: combining principles of game programming, theatre and film. Students will be introduced to a variety of audience interaction methods currently being used in the field. The goal of this seminar is to equip students with the skills to integrate an artistic and analytic approach to solving problems.
UGS 200H 011 - Comics, Graphs, and Figures: Creating and Measuring the Efficacy of Visual Communication in the Sciences
  - Stephen Thomas: Zoology
  - thoma549@msu.edu
  - Julie Libarkin: Geology
  - libarkin@msu.edu
  - Ryan Claytor: Art, Art History, and Design
  - rclaytor@msu.edu
  - Brief description: You can find many examples of visuals in science textbooks, journals, and popular news articles, some which help you interpret and apply the ideas in the reading and others that leave you scratching your head in confusion. This seminar has students playing the role of image creator, viewer, and researcher. Students will read primary literature on visual communication, then work with faculty experienced in visual arts, science education, and research to create and test visuals that communicate scientific concepts. No experience in arts or sciences is required for this course. Students will gain better communication skills and experience designing and conducting experiments in visual communication. Results of student projects will be presented at the University Undergraduate Research and Arts Forum and potentially at national meetings.

UGS 200H 012 - Ending the Practice of Private Property Abandonment and Blight
  - Rex LaMore: Urban & Regional Planning Program/Center for Community & Economic Development
  - lamore@msu.edu
  - Matt Syal: construction Management/School of Planning Design & Construction
  - syalm@msu.edu
  - Brief description: Private property abandonment is widespread in many legacy cities. The practice can lead to social and economic decline that threatens the public health and welfare of communities. It is imperative that this cycle of abandonment be ended! The implementation of policies that lead to the dismantling, removal, and restoration of private property are necessary for a sustainable future. This seminar will examine the causes of private property abandonment and examine the feasibility of establishing a private sector insurance program that provides for the cost of dismantling, removal, and restoration of abandoned properties. Students will work as an interdisciplinary team whose contributions will contribute to the submission to a grant to United States Environmental Protection Agency (EPA), annual P3-People, Prosperity & the Planet- Phase I Awards for 2015.

UGS 200H 013 - Evaluation of stress response and food quality of pigs
  - Cathy Ernst: Department of Animal Science
  - ernstc@msu.edu
  - Ron Bates: Department of Animal Science
  - batesr@msu.edu
  - Janice Siegford: Department of Animal Science
  - siegford@msu.edu
  - Sarah Wells: Department of Food Science & Human Nutrition
  - wellssa1@msu.edu
  - Brief description: This seminar will provide students with an opportunity to observe pigs as the pigs interact with each other in a group housing setting. Pigs in groups form social hierarchies, and aggression especially after mixing into new groups results in injuries and stress. Students will examine pigs for variation in stress response using salivary cortisol as a
bimarker and determine subsequent associations of stress response with food quality traits. The seminar will provide students with a farm-to-lab-to-food experience by including observations of live animals, and collection of data in the research laboratory as well as the MSU Meats Laboratory. Students will present their findings at the University Undergraduate Research & Arts Forum (UURAF).

- **UGS 200H 014 - Explorations into syntactic variation and acquisition**
  - Alan Munn: Linguistics, germ, Slavic, Asian, afr Lang
  - amunn@msu.edu
  - Cristina Schmitt: Linguistics, germ, Slavic, Asian, afr Lang
  - schmit12@msu.edu
  - Brief description: Although you don’t notice it very often, for many of the thoughts you might want to express, there is more than one way to say exactly the same thing. For example, you might say “OMG, my friend got arrested last night!” but you might also have said “OMG, my friend was arrested last night!” Both sentences are possible, and both sentences occur naturally in our speech, and both seem to express the same basic thought. So what’s the difference, and how do we “decide” which one to use? Similarly in continuing the conversation, you might say “He shouldn’t’ve drunk so much beer.” but you might also have said “He shouldn’t’ve drunk so much beer.” These are just a few of the subtle ways in which language can vary. In this course we will investigate the nature of this type of variation in both adults and pre-school age children. You will be responsible for designing and running an experiment or set of experiments within the general areas of current research on syntactic variation within the MSU Language Acquisition Laboratory. No background in linguistics is required, but you should have some interest in cognitive science and the scientific study of language in particular.

- **UGS 200H 015 - Media and Morality: Representations of Moral Intuition in Children’s Narrative Media**
  - Ron Tamborini: Department of Communication
  - tamborin@msu.edu
  - Brief description: The project does not require previous training or knowledge for students. The class will begin with readings and lecture reviewing literature from media theory and moral psychology in order to familiarize students with the logical foundation for the study’s research questions and hypotheses. Following this, we will review content analysis techniques and then provide students with hands-on training in its practice. This training will be used in a pilot study intended to establish the reliability of the study’s content analysis protocol. Once training is completed, students will conduct a content analytic study examining the portrayal of morality in children’s media.

- **UGS 200H 016 – Systemic Engagement: From Conceptual Framework to Community Practices**
  - Hiram Fitzgerald: Psychology and University Outreach and Engagement
  - fitzger9@msu.edu
  - Brief description: This seminar will introduce students to the concept and practices of systemic engagement, including systems theory, systems modeling, collective impact, strategic doing and community based participatory research. Students will also complete a community based participatory
research project at a Power of We Consortium Americorps Site in Greater Lansing. The core of the seminar focuses on efforts to develop critical thinking about the complex problems of the 21st century; specifically, systems of complex problems that some refer to as Wicked Problems or Messes. Students will work with university and community instructional staff to complete a qualitative CBPR study culminating in a poster presentation in Spring Semester and a report to the community. Fall Semester, students will complete an on-line competency based training program in research with human subject and an on-line orientation to community engagement (Tools of Engagement). The IRB training programs expose researchers to critical historical documents that are the basis for today’s laws, policies and practices that regulate research with human participants. At the completion of each on-line training, students receive a certificate specifying the term of approval. Copies of certificates must be turned in to the instructor and the originals should be incorporated into the student’s academic portfolio. Students receive assistance for travel and research related expenses through the Office of the Associate Provost for University Outreach and Engagement.

• UGS 200H 750 – Cuba FSA Urban Sustainability in Cuba and Michigan
  o Rene Hinojosa: Urban Planning
  o hinojosa@msu.edu
  o James Lucas:
  o lucasjam@msu.edu
  o Brief description: This seminar includes a study abroad component from December 12 – 23, 2014; students wishing to participate must apply through the MSU Office of Study Abroad website at www.studyabroad.msu.edu. Students will study urban sustainability with a specific emphasis on historic and cultural preservation, tourism, and economic development by comparing efforts in Havana, Cuba and various cities in the Midwest. The seminar will involve classes and fieldwork in early fall to prepare students for the international travel experience. Field experiences will involve trips to Grand Rapids to visit urban cultural and historical sites—including the Art Price competition—and an overnight to Detroit. Participants, working in teams with a faculty mentor, will design a research project that addresses the program themes, collecting data from primary and secondary sources while in the United States and Cuba. Students will present their research at the University Research and Arts Forum in April 2015. Students enrolling in UGS 200H section 750 should have some experience with the Spanish language and an interest in learning about other cultures, as well as topics related to sustainability, resource economics, and historic preservation. Participants will develop intercultural competence, improve oral and written skills, and become familiar with various humanist and social science research methods. This course will meet in 207/208 Eustace-Cole Hall on some Thursday afternoons prior to travel, and include at least two field trips during the Fall (see www.studyabroad.msu.edu). All UGS 200H seminars have Fall enrollment but seminar work will continue into the Spring semester with expected meetings and activities occurring in January and February. Participants will also be enrolled in UGS 102 section 750 for Spring 2015.